

(No Model.)

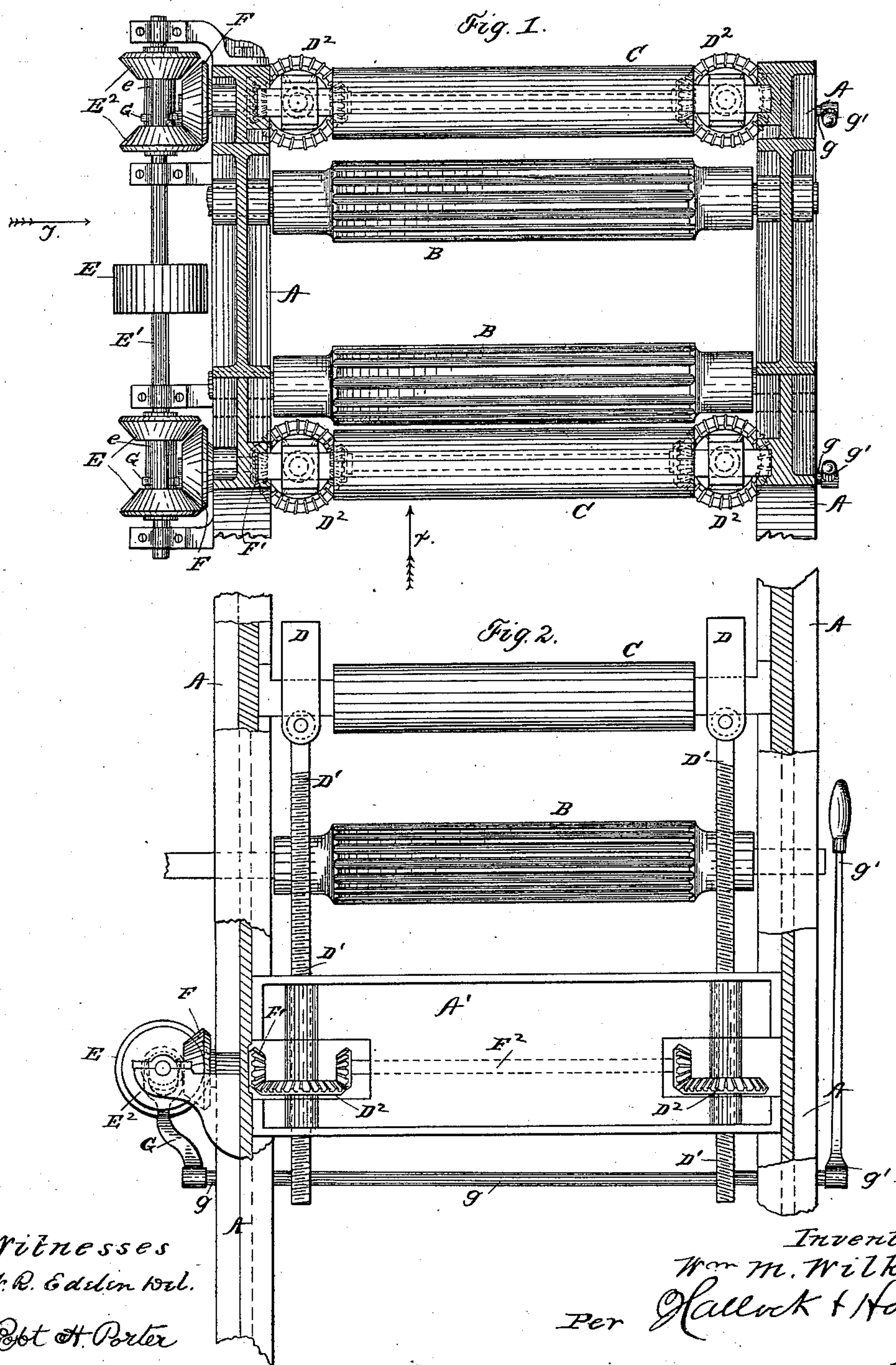
2 Sheets—Sheet 1.

W. M. WILKIN.

GANG SAW MILL.

No. 304,983

Patented Sept. 9, 1884.



Witnesses
Mr. R. Edelen Vol.

Robt H. Porter

Inventor
Wm M. Wilkin
Per Hallock & Halleck
Att's

(No Model.)

2 Sheets—Sheet 2.

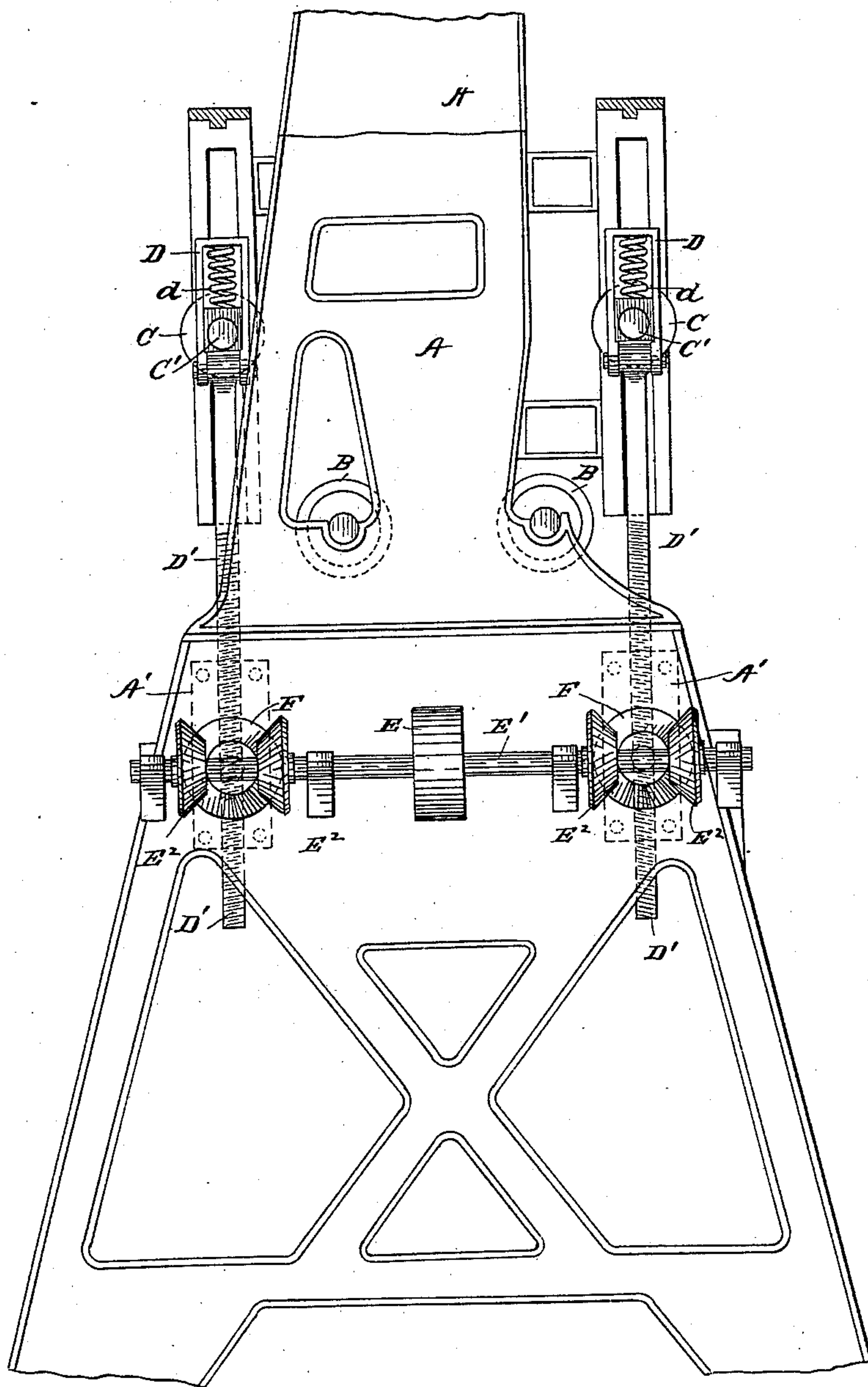
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Fig. 3.



Witnesses.

W. R. Edlin, Del.

Robt H. Porter

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UNITED STATES PATENT OFFICE.

WILLIAM M. WILKIN, OF ERIE, PENNSYLVANIA.

GANG-SAW MILL.

SPECIFICATION forming part of Letters Patent No. 304,983, dated September 9, 1884.

Application filed June 27, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM M. WILKIN, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Gang-Saw Mills; 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.

This invention relates to the construction of that class of reciprocating-saw mills which are known as "gangs;" and it consists in providing a new and improved manner of hanging and operating the presser-rolls.

The invention is illustrated in the accompanying drawings as follows:

Figure 1 is a plan view of the rolls and operating-gearing, with the frame-work of the gang, which is above the rolls, removed. Fig. 2 is a front elevation of the same parts, (arrow *x* in Fig. 1 showing the line of vision,) with the frame of the gang in fragment. Fig. 3 is a side elevation of the same parts, (the arrow *y* in Fig. 1 showing the line of vision,) the frame of the gang being broken away above and below the parts entering into the invention.

A A and A' mark the frame-work of the mill. B B mark the feeding-rolls. C C mark the presser-rolls. The other parts shown and lettered will appear in proper connection hereinafter.

Heretofore, so far as I am aware, the presser-rolls have been operated from screws, which are adjusted in the frame above said rolls. Such a construction necessitates a very strong construction of the upper part of the frame in order to hold the screws and resist their action.

The object of my invention is to so arrange the parts that the screws which act upon the presser-rolls shall be operated from below and draw down on the rolls. Such an arrangement brings the point at which the screw acts upon the frame at that part which is strongest, and, besides, it acts to draw the frame together rather than to spread it apart vertically, and the top or upper part of the frame can be made much lighter, thus saving great-

ly in metal. By my construction a screw is connected with each end of each presser-roll, which is an advantage over using one screw for each roll, as commonly.

My construction and its operation will fully appear from the following general description. The journals of the rolls C are in boxes C', which are guided in proper guides in the frame-work, and are embraced by stirrup-irons D, which are connected with the screws D'. Springs *d d* are included within the stirrup-irons to make the action of the rolls yielding. These may be applied in many various ways, which will readily be suggested to a mechanic. The screws pass into pinioned or geared nuts D², which are secured upon large cross-girts A' A'; or they may be secured in specially-arranged brackets, if desired. The means provided for rotating these nuts constitute an essential feature of this invention. It is important that the two screws of each roller act simultaneously, so that the rollers shall be carried up and down horizontally. It is also essential that the gearing for moving the nuts be operated by gearing which, if the operator is careless, will not give an undue amount of pressure, but will slip before any breakage occurs. These points are fully attained in the following manner: Mounted in brackets on the side of the frame is a shaft, E', which is driven by a pulley, E, which may be driven by a belt from any convenient shaft of the surrounding machinery. On the shaft E', opposite the screws D', at each end of the shaft, are double-cam frictions E² E², which are mounted on the shaft by a spline and groove or some similar construction. Each of these frictions are provided with shifting mechanism, which is operable from the sawyer's position, so he can have control of them at all times. On the side of the frame opposite the frictions E² are journaled the engaging-frictions F F', which carry on the other end of their shafts beveled gears F' F', which gear into the pinions on the nuts D², which are adjacent, and a geared shaft, F², connects the nuts so operated with those across the frame at the other end of the roller, so that the two nuts will always move uniformly or simultaneously. It will be seen that the frictions E² F may be operated separately, so

that the sawyer can raise or lower one roller C without affecting the other. When there is no log in the mill, the rollers C can be run down below the feed-rollers and out of the way, so that the feed-rollers can be taken out, as it is often necessary to do to repair the saws.

What I claim as new is—

1. In a reciprocating saw mill, the combination, with the feed-rollers arranged below the logway, of pressure-rollers for action upon the upper side of the log, said rollers being operated from nuts below the logway, and adapted to be drawn below the feed-rollers when desired, substantially as described.

2. In a gang-saw mill, the combination of the pressure-rollers C C above the feed-rollers, screws D', connected with the ends of said rollers and extending below the logway, operating nuts below the logway, and having pinions D², adjusted in the frame-work below the logway, and means for operating the said screw and nuts, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM M. WILKIN.

Witnesses:

M. F. HALLECK,

ROBT. H. PORTER.