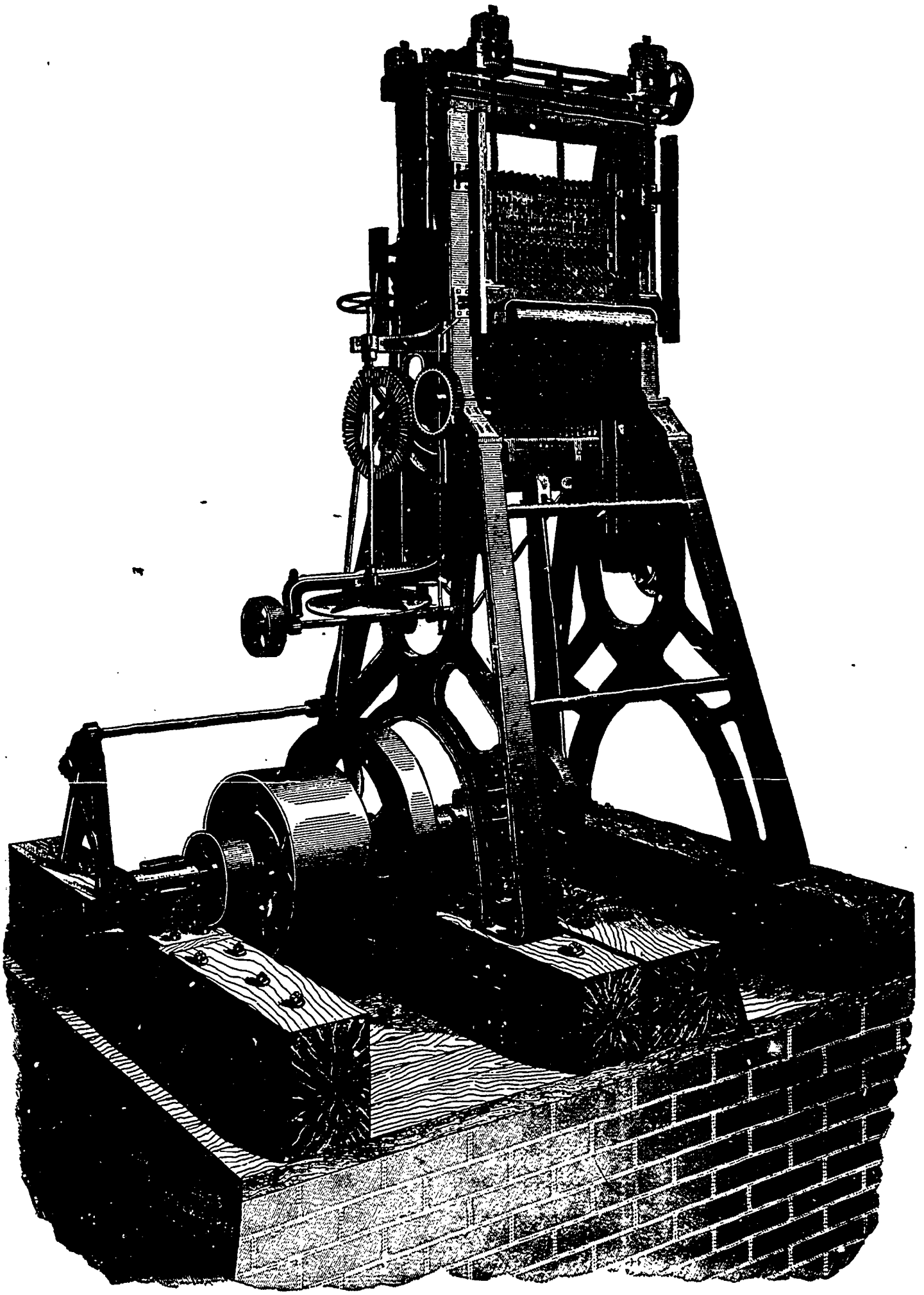
IRON FRAME GANG MILLS.

The gang mill is regarded as possessing material advantages in the rapid and economical manufacture of lumber. Among the recent improvements tending to perfect such mills, those which are shown in the iron frame Stock Gang manufactured by Wickes Bros., East Saginaw, Mich., are eminently valuable. Our large and elegant engraving represents one of these mills, constructed to be driven by belt, friction or direct engine, as may be desired. The important requisite in this class of mills is such design and proportion of parts as will insure durability and continued movement at the highest speed, safely increasing the quantity and improving the quality of work done at a lesser feed, and admitting the use of thinner saws than is practical in the slower moving sash. These are among the advantages gained in the iron frame machine, overcoming the necessity of an expensive mill frame, saving time and expense in setting up, and avoiding the liability of decay or change of position.

Many improvements have been made in the mechanism of oscillation, and from these the builders of this mill have adopted what is known as the Wilkin movement, which oscillates the top and bottom slides. The top slides are pivoted at the top end, and the bottom ones from the bottom end, both being operated by one rock shaft from the centre. This movement when properly adjusted gives an easy clearance and the easiest cut yet obtained. It adds no extra weight to the sash, and avoids the cumbrous rock shaft and its attendant joints, usually weighing from three to five hundred pounds, which have been found so objectionable in many other movements. The feed is continuous, and is made variable from ¼ to 1¼ in. to each stroke, controllable by the sawyer. Power is applied to the press rolls in the double screw form with pivot point, also operated by the same hand. A special feature of this machine is the spreading of the lower frame so that its base rests upon an independent portion of the foundation from the main pillow block or crank shaft. The solidity of the structure is thus increased, both by the increased width at the base and the prevention of connecting vibrations, which necessarily communicate when resting upon the same part, as in other forms of such machines heretofore in use.

The mill shown is one of 26 saws, 4½ feet long, sash 38 inches wide in the clear, and stroke 20 inches, capable of making 230 strokes per minute. The crank shaft is 9 inches in diameter, of the best forged iron. The main pillow block has a base 6½ feet long by 21 inches bearing, weighing 2,800 pounds. The cap is secured by two forged bolts, 3½ inches in diameter, and by this arrangement no unequal strain upon the cap is possible. A disk crank is used with suitable counterbalance, expressly adapted to the weight and speed of sash; a hammered steel wrist pin 5 inches in diameter, and a forged pitman of the most approved pattern, with best composition boxes. The iron drive pulley is 4 to 4½ feet in diameter and 24 inches face; the fly-wheel, 6 feet in diameter, weighing 4,700 pounds, turned off at rim. When a wider and heavier sash is required, a proportionate increase is made in all these parts.

In the construction of the sash the stiles are made of steel; the lower girt and upper heads are made in one solid piece, without rivets, giving greatest strength possible, with the least weight. The outfit also includes eight iron rollers for the floor, 8½ inches in diameter, with iron stands, and geared as live rolls when desired, a full set of Lippencott's steel saw hangings, and gauges for one-inch lumber. The weight of the machine here shown is 18½ tons. They are, however, built in larger or smaller sizes, adapted to any locality, quality or quantity of work desired.



IRON FRAME GANG MILL.

A Ship Canal

The bill for a ship canal to Manchester, England, has passed the House of Commons, burdened however with conditions which will make it a very uncertain enterprise. The promoters are required before commencing work to go to Parliament for a fresh bill showing exactly what work they intend to carry out in the estuary of the Mersey, they are also forbidden to do anything at the canal proper or to deviate any railways until they have progressed so far with the works in the estuary as to show what the effect on the regime of the channel and the approach to the Liverpool docks is likely to be and these works are to be so constructed that they can be removed if any detrimental effects are likely to be produced. The House of Lords will probably pass the bill in this form, but it will, we should think, be difficult to raise the large capital required, under such burdensome conditions.

A Half Million Fire.

WILLIAMSPORT, Pa., Aug. 27—A fire started this evening in the sawmill of Finley, Young & Co., and destroyed it. The flames spread to the lumber yards of Merriman & Son and others, burning over a square and destroying a large quantity of lumber. At midnight it was still burning, but with prospects of being subdued. Several dwellings and barns were burned. Twenty-five to thirty million feet of lumber were destroyed. The loss is estimated at half a million.