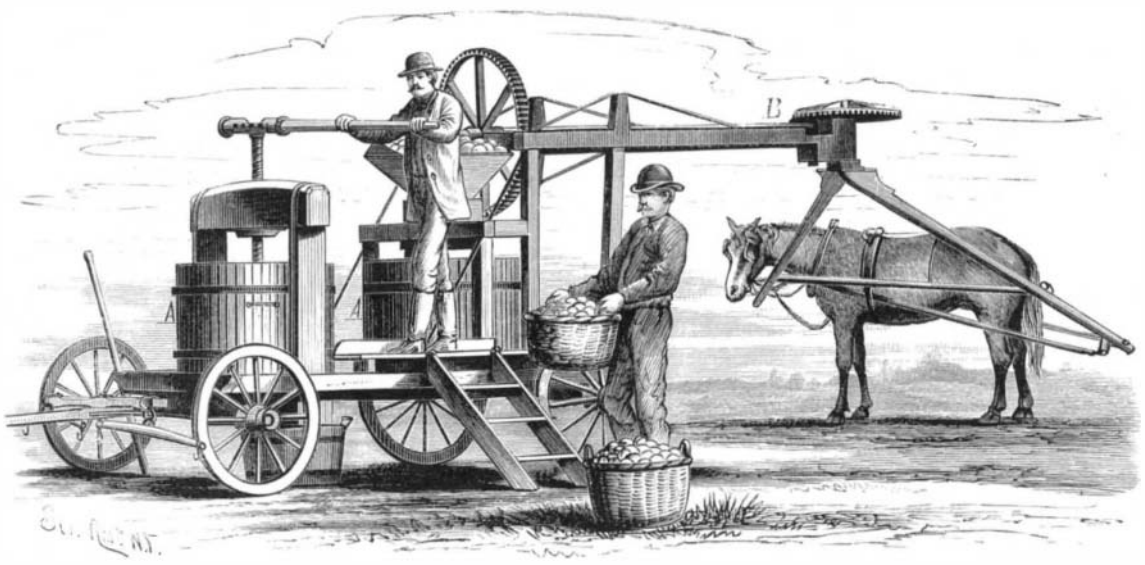
IMPROVED PORTABLE CIDER MILL.

We illustrate herewith a new horse power cider mill which is readily moved from farm to farm, and by which, it is claimed, entire crops of apples may be ground and pressed quickly and economically.

Upon a platform placed on wheels and adapted to be drawn by horses are longitudinal track rails on which are two curbs, A. These curbs have grooved bottoms so that they may be readily moved on the rails from one end of the platform to the other. Above one curb is placed a cross-beam for the screw of the press head, and above the other is the receiving hopper and grinding roller of the mill. A portion of the platform is inclined toward a central lateral gutter which has a spout at one side through which the cider is drawn off. Opposite the exit spout is hinged a step-ladder, which may be thrown upon the platform after use. A horizontal overhead frame extends back of the platform, and supports at the end the master wheel and shaft of a horse power, B. The horse is hitched to arms, one of which is rigidly attached to a socket of the shaft, and the other is hinged to fold up on the fixed arm after use. The arms are braced by a cross-piece and lock pin, and turn, when the horse is hitched to them, the master wheel, and thereby an intermeshing pinion and driving shaft supported on the overhead frame. A gear wheel at the opposite end of the driving shaft meshes with a pinion of the grinding cylinder and keeps the same in motion.



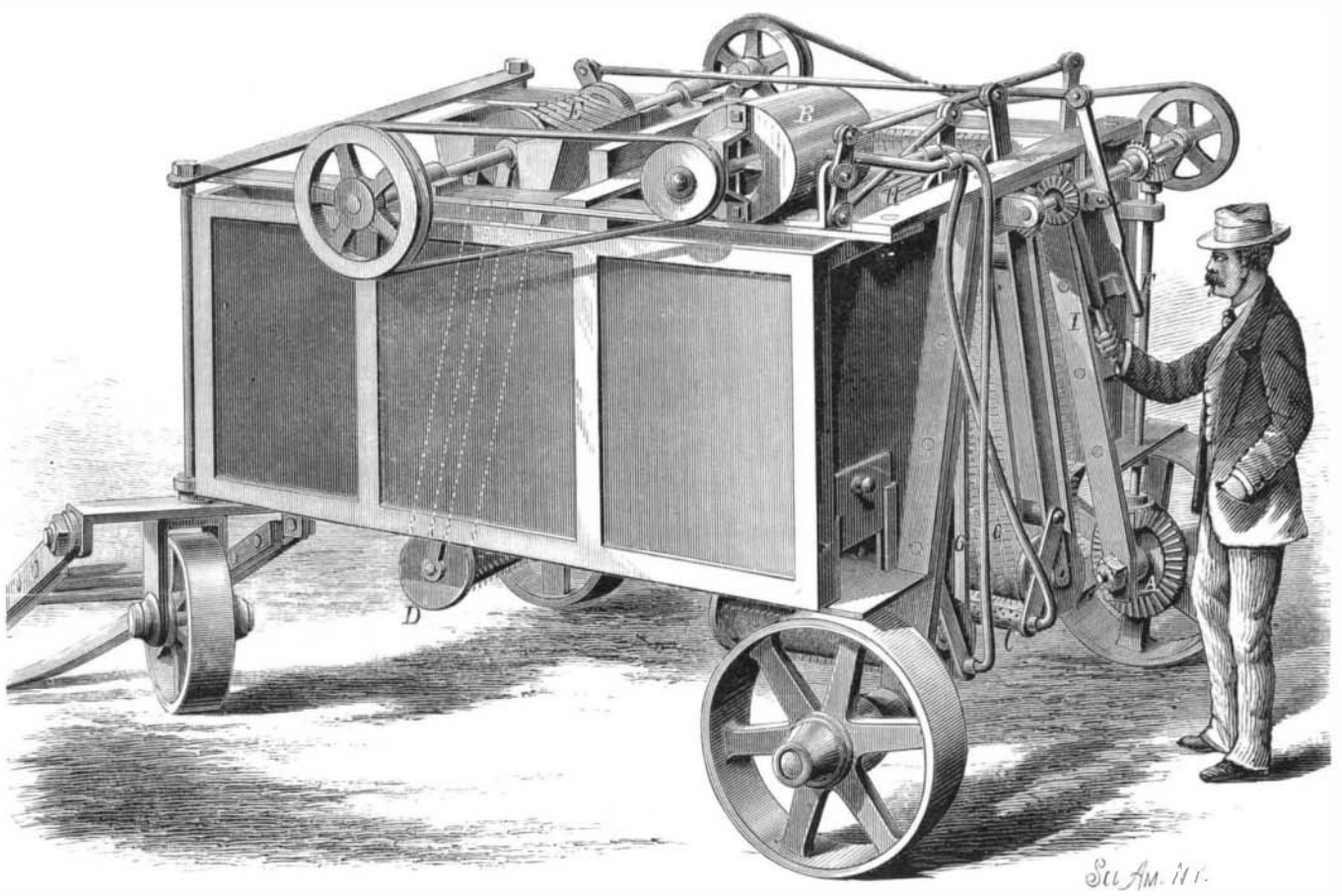
SIKES' PORTABLE CIDER MILL.

When the first curb is filled with ground fruit it is moved on the rail below the press and an empty curb is substituted beneath the grinding mill. The pomace in the first curb is then pressed and the cake is taken out, when the curb is again ready to be filled by the mill. In this way the curbs are alternately changed from mill to press, and work is continuously maintained at considerable saving of time and labor.

Patented through the Scientific American Patent Agency November 6, 1871. For further information address L. V. and S. R. Sikes, East Otto, Cattaraugus county, N.Y.

POWELL'S IMPROVED COTTON HARVESTER.

We have frequently called the attention of inventors to the need which exists for a machine for harvesting cotton, and have pointed out the saving in labor which an efficient apparatus would effect. The problem, however, is rather a difficult one, inasmuch as it involves not merely the picking of the cotton, but its gathering clean, that is, free from leaves and other trash. An ingenious device for this purpose is illustrated in the annexed engraving, and the mode in which it operates is by subjecting the bolls to a blast from the blower, which causes the light cotton to extend upward so that its filaments are easily caught in fine teeth on endless moving aprons. These last are cleared by stationary fingers, and the cotton is thus accumulated in the receptacles in the machine.



POWELL'S IMPROVED COTTON HARVESTER.

The mechanism is actuated by gearing at A, connected with one of the rear wheels. B is the blower, the blast of which is conducted downward by flexible tubes and discharged through the perforated pipes, C. The machine has an opening at the middle so that its wheels move on each side of a row of plants, and the latter in passing through said opening are stripped.

As the machine progresses the toothed belt, D, first comes in contact with the top of the plant, and the cotton caught by the teeth is carried upward until removed by the fingers, E, when it falls into the receptacle immediately below. By means of suitable lever connections by moving the handle, F, the lower roller over which the belt, D, passes may be swung up so that the action of the belt may be adjusted to plants of any height, or the belt may be lifted out of operation altogether. The plants, as the machine passes over them, are next stripped on the sides by the belts, G. The perforated blast pipes, C, direct jets of air upward along the inner surface of the aprons, so that any particles of cotton that may be detached by the action of the machine are carried upward until they are caught by the teeth. The same blast also serves to remove sand. The cotton thus collected is carried upward, removed by fingers, H, and thus removed into receptacles as before. The drums of each belt are journaled in a frame, and the gearing between those of the two rear belts is such that the movement of one frame creates a similar motion in the other, but in the opposite direction. This movement is governed by the lever, I, by operating which the lower drums are adjusted nearer together or further apart, so as to suit the sizes of the plants and to secure close picking. Horses are attached to caster wheels on the front corners of the machine, and a platform may be provided in rear for supporting the operator. Openings, one of which is shown at J, are made for emptying the cotton boxes. The machine is guided by the horse in the shafts shown. The teeth on the aprons are the same as card clothing, except that they are but three eighths of an inch in length. They are placed very close together, so as to exclude trash and leaves. The inventor informs us that this machine has been very successfully tested, and he claims that it will cause a saving of two cents a pound in cotton harvesting.

Patented October 23, 1877. For further particulars address the inventor, Mr. William J. Powell, Marshfield, Plymouth county, Mass.

The Talking Phonograph on Exhibition.

Mr. Thomas A. Edison recently exhibited his talking phonograph before the Polytechnic Association of the American Institute, in this city. This was the first public showing of the instrument, and although much yet remains to be done to make it fulfill the design of its inventor, its capabilities have already been considerably advanced beyond those which it possessed when displayed to us in this office shortly after its origination. The mechanical construction, that is, the rotating sliding cylinder, the vibratory membrane and the tin foil strip which receives the indentation and in turn transmits the pulsations to the receiving diaphragm, have not been materially modified, but by the use of reflectors Mr. Edison has succeeded in magnifying the sound so as to render the same quite audible throughout a large apartment. The scientists who assembled to hear the phonograph manifested genuine astonishment, and the instrument itself, apparently on its good behavior, did its best to strengthen the impression. It proved its capacity as a linguist by repeating sentences spoken to it in English, Dutch, German, French, Spanish, and the Hebrew. It imitated with marvelous fidelity the barking of dogs, crowing of cocks, etc., and then taking a severe cold, coughed and sneezed and wheezed, until the physicians in the audience instinctively began to write prescriptions. After the inventor had exhibited its reproduction of his remarks, his auditors wanted the machine to imitate theirs also, and for a long time the apparatus was made the recipient probably of all the different sounds that the human voice could produce or scientific ingenuity devise. It withstood the test triumphantly, and remained in modest silence while praises were lavished upon it and suggestions innumerable made as to its future uses. Another proposal was to reproduce figures of popular speakers in life size—electrotype Mr. Beecher, for instance—reproduce his speech in tin foil, put a phonograph, run by clockwork, inside of him—the statue, not the man—and stand him on a platform to repeat the new lecture on the "Wastes and Burdens of Society." Another suggestion was that public speakers might repeat their speeches to the phonograph, and then twenty-four hours later have the phonograph repeat the words to them. They could thus prevent themselves from making rash or overheated or silly remarks. An irreverent individual "didn't see but that now, with the talking phonograph and singing telephone, clergymen and choirs were out of date. The phonograph could repeat service every Sunday and run off old sermons with wonderful accuracy; while, by having enough telephones, one choir would supply music to all the churches in the city." An amendment to this was the suggestion to use only the phonograph, because it could sing as well as speak, and thus it might do the duty of both preacher and choir. An indolent listener to the foregoing wanted to know if a phonograph could not be combined with a clock so as at the proper times to remark, "7 o'clock, time to get up;" "12 o'clock, go to dinner," and so on. The audience, some of the members of which were at first rather doubtful as to the foundation for all we had said regarding Mr. Edison's invention, left well convinced as to its wonderful capabilities. Meanwhile the inventor is relaxing no efforts to improve it, and we shall be much mistaken if before many months he does not astonish us with a machine able to do much greater things than those already accomplished.