

truly and quite as nobly as though they were wood-choppers or bricklayers. He who, by whatever means, helps to diminish the fearful aggregate of ignorance, sin, and suffering in the world, and diffuse instead, knowledge, virtue, and happiness, is worthy of all honor, and far from me be the wish to discourage and degrade him. And yet I hold it the duty of every father to look well to the physical and industrial training of his sons and daughters—to see that each of them is early inured to some form of manual labor, and thoroughly trained to efficiency in some pursuit which ministers directly to the material or physical needs of mankind. My reasons for this conviction are summed up as follows:

I. The demand for intellectual labor, or its products, and even for mercantile capacity, is exceedingly capricious. In a season of commercial prosperity, a great city affords employment to thousands as clerks, bookkeepers, teachers of music, languages, etc., who will nearly all be left high and dry by the ebb of the tide. War, pestilence, a bad harvest, a business revulsion, throws them suddenly out of employment, and no merit or excellence on their part can avert the catastrophe. I would have every man so armed and equipped for the battle of life that, if suddenly unhorsed, he can fight on efficiently and undismayed on foot.

II. The professions are fearfully overcrowded. A Western village is half peopled by doctors, lawyers and clergymen, who have rushed in ahead of the expected flood of immigration. Like miners in the Sierra Nevada, or Rocky Mountains, they have severally staked out their claims, and are waiting for others to come in and help to develop and work them to mutual profit. But "while the grass grows, the steed starves." Whatever may be their fortune ten or twenty years hence—and events are constantly interposing to blast their sanguine hopes—doctor, lawyer, minister, are often winning but a meagre, precarious support for the present. "I cannot dig; to beg I am ashamed," is the plaint which many would utter if they could afford to be frank and outspoken. Thousands suffer and stagger on, oppressed by want and ever-increasing debt, who would gladly take refuge in productive industry if they had been trained with familiarity to pitch-forks and plough-handles. They would out-grow their present embarrassments if it were not for the new doctors, lawyers and clergymen, annually ground out to compete with them for practice or parishes, and whose training is as helplessly one-sided as their own. I would qualify the professional men who shall henceforth be trained for a broader and more assured usefulness than that of their elder brethren.

III. New York City swarms with hungry, needy, shivering cowering, cringing fellow-mortals, all in eager, imploring quest of "something to do." To the reproach of what passes for education, I must say that a majority of these have had considerable money spent in schooling them for lives of usefulness. They are qualified, I presume, to keep books, or copy manuscripts, or teach languages, or act as governesses, or follow some other of the frightfully overstocked vocations. But when I say to one of them, "The work you seek is positively not to be had, since ten want to do it where one wants it done; you must strike off into the broad, free country, and ask farmer after farmer to give you work, till you find it," the general response, "I know nothing of farming," strikes on my ear like a knell. Even at seasons when the farmers were intensely hurried by their summer harvest, and ready to pay largely for any help that was not hindrance, I have known our city to be thronged with weary, sad petitioners for "something to do." If our current education were not a blunder, or a fraud this could not be.

3. BIRDS AND THEIR USES IN AGRICULTURE.

The *Advocate* says the following facts are derived from correct sources of information, of the question how to get rid of the worms. Baron Von Tschudi, the well known Swiss naturalist, says:—"Without birds, successful agriculture is impossible. They annihilate in a few months a greater number of destructive insects, than human hands can accomplish in the same number of years. Amongst the most useful birds for this purpose may be classed the swallow, wren, robin redbreast, titmouse, sparrow and finch." Tschudi tested a titmouse upon the rose bushes of his neighbor and rid the same in a few hours of innumerable lice. A robin redbreast killed in the neighborhood of eight hundred flies in an hour. A pair of night swallows destroyed in fifteen minutes an immense swarm of gnats. A pair of wrens flew thirty-six times in an hour, with insects in their bills, to their nests. He considers the sparrow very important, a pair of them carrying in a single day 300 worms or caterpillars to their nests—certainly a good compensation for the few cherries they pluck from the trees. The generality of small birds carry to their young ones, during the feeding period, nothing but insects worms, snails, spiders, &c. Sufficient interest should be manifested by all to prevent the discharge of firearms in the vicinity of orchards, vineyards and flower gardens, as thereby the useful birds become frightened.

4. THE BAROMETER IN AGRICULTURE.

Some ten years since the agricultural press of the country published several articles commending the usefulness of the barometer for foretelling the weather. People became interested in the subject, inquiries were made for instruments, and in a few months the country swarmed with travelling agents, selling barometers. Most of the instruments so distributed were very inaccurate, and comparatively worthless; and, as but few of the purchasers had any experience in making observations, they soon found them to be of no practical use, and became thoroughly disgusted with them.

The best barometer for the farmer is the straight glass tube, closed at the top, filled with quicksilver, dripping into a capacious cistern. By using a large cistern, the rise of mercury therein, when the barometer falls, is greatly diminished, and thus the apparent and real rise are nearly co-equal. It should be placed in a room not subject to extreme changes of temperature, since heat expands the mercury, to such an extent that, for accurate scientific purposes, a correction for difference is necessary, to show the height caused by atmospheric pressure alone.

The mere fact that the barometer is high or low, neither indicates fair weather nor foul; it is only by successive observations, compared with each other, that the weather may be predicted. Several years since, an English observer laid down this general rule, which subsequent experience has confirmed: "After a continuance of dry weather, if the barometer begins to fall slowly and steadily, rain will ensue; but if the fine weather has been of long duration, the mercury may fall two or three days before a change will take place, and the longer the time which elapses before the rain comes, the longer the wet weather is likely to last." Again, in a time of continuous rain, if the barometer gradually rises, fair weather is certain to follow, although it may continue to rain one or two days before the change will take place.

Of eighty-six storms of snow and rain in 1868, fifty-six were preceded by a fall of the barometer, extending from six to twenty-four hours; fourteen, by from twenty-four to forty-eight hours; ten succeeded a rise, lasting from twelve to twenty-four hours, immediately after a previous depression; two succeeded a rise extending forty-eight hours, and four were unattended by any disturbance of atmospheric pressure.

It will be seen from the results above mentioned, that by watching the barometer carefully, the future weather may be predicted with a probable degree of accuracy. Its value, therefore, to the farmer, when cutting grass and grain, can hardly be over estimated. I will relate a single instance. One morning early in July, a neighbouring farmer came into town, and said he had ten acres of grass down, and should cut ten acres more that day, as the weather was fine, and had every appearance of continuing so. I told him that the barometer had been falling for two days; advised him to go home and secure the hay already cut, as it would certainly rain within twenty-four hours. He followed my advice: the next day it commenced raining and continued three days. From that time his confidence in the barometer was firmly established—A. H. Sheldon, in *Hearth and Home*.

5. AMERICAN EDUCATION IN AGRICULTURE.

The following statement of Government grants of agricultural institutions, in accordance with the Congressional act, is said to be correct:—

	Land Scrip.
Yale College Scientific School.....	\$160,000
Amherst College.....	360,000
Cornell University, Ithaca, N. Y.....	990,000
Centre County (Pa.) College.....	720,000
College, Lansing, Mich.....	240,000
College, Maryland.....	210,000
College, Hanover, N. H.....	150,000
College, Burlington, Vt.....	150,000
College, Madison, Wis.....	286,000
College, Morgantown, Va.....	150,000
College, New Brunswick, N. J.....	210,000
College, Lexington, Ky.....	330,000
College, Oakland, Cal.....	150,000
College, Providence, R. I.....	120,000
College, Manhattan, Kan.....	90,000
University, Illinois.....	480,000
College, Iowa.....	390,000
Total	\$5,186,000

It is safe to estimate that the donations from cities, communities, and private individuals, including that of Mr. Cornell, amount to \$2,000,000 more.—*Philadelphia Educational Gazette*.